

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended) An automatic gain control apparatus, comprising:

a first input for receiving from a communication receiver information indicative of signal strength of a received communication signal;

hardware coupled to said first input and responsive to said signal strength information for determining an automatic gain control setting for the communication receiver without incurring program execution delay of a data processor; and

the communication receiver comprising dual channels, each having a channel filter circuit with a gain adjustable by said hardware, wherein a gain adjustment is conducted in the channel filter circuit itself.

Claim 2. (previously presented) The apparatus of Claim 1, wherein the communication receiver is a TDMA RF receiver.

Claim 3. (previously presented) The apparatus of Claim 1, wherein said signal strength information includes an RSSI signal derived from an amplifier portion of the communication receiver.

Claim 4. (cancelled)

Claim 5. (original) The apparatus of Claim 1, including a second input for receiving information indicative of a desired bias level of an amplifier of the communication receiver, said hardware coupled to said second input and also responsive to said bias level information for determining the automatic gain control setting without incurring program execution delay of a data processor.

Claim 6. (original) The apparatus of Claim 5, wherein said hardware includes difference circuitry responsive to said bias level information and said signal strength information for determining therefrom a deviation value indicative of a difference between said bias level and said signal strength.

Claim 7. (original) The apparatus of Claim 6, wherein said hardware includes range checking circuitry coupled to said difference circuitry for determining whether the deviation value is within a predetermined range.

Claim 8. (previously presented) An automatic gain control apparatus, comprising:

- a first input for receiving from a communication receiver information indicative of signal strength of a received communication signal;

- hardware coupled to said first input and responsive to said signal strength information for determining an automatic gain control setting for the communication receiver without incurring program execution delay of a data processor;

- a second input for receiving information indicative of a desired bias level of an amplifier of the communication receiver, said hardware coupled to said

second input and also responsive to said bias level information for determining the automatic gain control setting without incurring program execution delay of a data processor;

wherein said hardware includes difference circuitry responsive to said bias level information and said signal strength information for determining therefrom a deviation value indicative of a difference between said bias level and said signal strength; and

wherein said hardware includes filter gain circuitry coupled to said difference circuitry for determining in response to said deviation value a filter gain for a channel filter of the communication receiver.

Claim 9. (original) The apparatus of Claim 8, wherein said hardware includes an output coupled to said filter gain circuitry for outputting to the communication receiver information indicative of said filter gain.

Claim 10. (original) The apparatus of Claim 8, said apparatus including a third input for receiving information indicative of a gain value selected for an LNA of the communication receiver, said hardware coupled to said third input and also responsive to said LNA gain value for determining said automatic gain control setting without incurring program execution delay of a data processor.

Claim 11. (original) The apparatus of Claim 10, wherein said hardware includes a summing circuit coupled to said third input and said filter gain circuitry for adding said filter gain value to said LNA gain value to produce a total gain value.

Claim 12. (original) The apparatus of Claim 11, wherein said hardware includes a range checking circuit coupled to said summing circuit for detecting whether said total gain value has reached a predetermined gain limit value.

Claim 13. (original) The apparatus of Claim 12, wherein said range checking circuit is further operable for detecting whether said total gain value has reached either of an upper gain limit or a lower gain limit.

Claim 14. (previously presented) The apparatus of Claim 15, including a second input for receiving information indicative of a predetermined power level value, said hardware coupled to said second input and also responsive to said power level information for determining said automatic gain control setting without incurring program execution delay of a data processor.

Claim 15. (previously presented) An automatic gain control apparatus, comprising:

- a first input for receiving from a communication receiver information indicative of signal strength of a received communication signal;

- hardware coupled to said first input and responsive to said signal strength information for determining an automatic gain control setting for the communication receiver without incurring program execution delay of a data processor;

- a second input for receiving information indicative of a predetermined power level value, said hardware coupled to said second input and also responsive to said power level information for determining said automatic gain

control setting without incurring program execution delay of a data processor;
and

wherein said predetermined power level value is a threshold value, and
wherein said hardware includes compare circuitry for comparing said threshold
value with an estimated total power of the communication receiver to select an
LNA gain setting for the communication receiver.

Claim 16. (original) The apparatus of Claim 15, including an output coupled to
said compare circuitry and responsive thereto for outputting to the
communication receiver information indicative of the selected LNA gain.

Claim 17. (previously presented) An automatic gain control apparatus,
comprising:

a first input for receiving from a communication receiver information
indicative of signal strength of a received communication signal; and

hardware coupled to said first input and responsive to said signal strength
information for determining an automatic gain control setting for the
communication receiver without incurring program execution delay of a data
processor; and

a second input for receiving information indicative of a gain value selected
for an LNA of the communication receiver, said hardware coupled to said second
input and also responsive to said LNA gain value for determining said automatic
gain control setting without incurring program execution delay of a data
processor.

Claim 18. (original) The apparatus of Claim 17, including a third input for receiving information indicative of a further gain value selected for the LNA of the communication receiver, said hardware coupled to said third input and also selectively responsive to one of said LNA gain values for determining said automatic gain control setting without incurring program execution delay of a data processor.

Claim 19. (previously presented) A communication receiver apparatus, comprising,

an LNA;

a receiver portion for receiving and processing communication signals;

a control portion for determining an automatic gain control setting for said receiver portion, said control portion including a first input coupled to said receiver portion for receiving therefrom information indicative of signal strength of a received communication signal, said control portion further including hardware coupled to said first input and responsive to said signal strength information for determining said automatic gain control setting without incurring program execution delay of a data processor; and

wherein said control portion includes a second input for receiving information indicative of a gain value selected for said LNA of the communication receiver, said hardware coupled to said second input and also responsive to said LNA gain value for determining said automatic gain control setting.

Claim 20. (original) The apparatus of Claim 19, provided as an RF communication receiver apparatus.

Claim 21. (original) The apparatus of Claim 19, wherein said signal strength information includes an RSSI signal.

Claim 22. (original) The apparatus of Claim 21, wherein said receiver portion includes an amplifier which produces said RSSI signal.

Claim 23. (original) The apparatus of Claim 19, wherein said control portion includes a second input for receiving information indicative of a desired bias level of an amplifier of the communication receiver, said hardware coupled to said second input and also responsive to said bias level information for determining the automatic gain control setting without incurring program execution delay of a data processor.

Claim 24. (original) The apparatus of Claim 19, wherein said control portion includes a second input for receiving information indicative of a predetermined power level value, said hardware coupled to said second input and also responsive to said power level information for determining said automatic gain control setting without incurring program execution delay of a data processor.

Claim 25. (cancelled)

Claim 26. (currently amended) An automatic gain control method involving a filter circuit, comprising:

providing information indicative of signal strength of a communication signal received by a communication receiver;

responsive to said signal strength information, determining an automatic gain control setting for the communication receiver without incurring program execution delay of a data processor; and

adjusting filter gain settings of dual channels of the communication receiver, wherein gain settings are in the filter circuit itself.

Claim 27. (original) The method of Claim 26, including performing said determining step also in response to information indicative of a desired bias level of an amplifier of the communication receiver.

Claim 28. (original) The method of Claim 26, including performing said determining step also in response to information indicative of a predetermined power level value.

Claim 29. (original) The method of Claim 26, including performing said determining step also in response to information indicative of a gain value selected for an LNA of the communication receiver.

Claim 30. (previously presented) The method of Claim 26, further comprising the step of implementing the automatic gain control method in a TDMA system.